SADC DROUGHT MONITORING CENTRE
P.O.BOX BE 150,
BELVEDERE,HARARE,
ZIMBABWE

TEL/FAX: +263 4 778172
EMAIL: DMCGEN@DMC.CO.ZW
WEB:WWW.DMC.CO.ZW

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OUTLOOK FOR NOVEMBER 2004—JANUARY 2005

HIGHLIGHTS

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EL-NIÑO UPDATE`

- Slight positive SST anomalies in the tropical Pacific.
- SOI maintained trend of negative values
- Models project likelihood of weak El-Nino conditions through early 2005.

Outlook Highlights

- Below-normal to Normal conditions over the southern part of Zimbabwe, southern Mozambique, eastern Botswana, most of South-Africa, Lesotho and Swaziland.
- Normal to above- normal rainfall across most of the SADC region is forecast for the period November-December-January 2004/05.
- The month of October 2004 has been generally dry.

Review of the rainfall situation 1—20 October 2004

Most of SADC countries from which data was received recorded little or no rain during the first 20 days of October, 2004. Exceptions were Zimbabwe, parts of Mozambique and South Africa received rainfall of between 31 and 150 mm (Fig. 1).

The percentage-of-normal rainfall map, indicates normal to above normal rainfall over eastern Tanzania, southern tip of Malawi, northern and western Mozambique, most of Zimbabwe, south-western Botswana and western South Africa, Fig. 2. Remainder of the sub-region was mainly below normal.

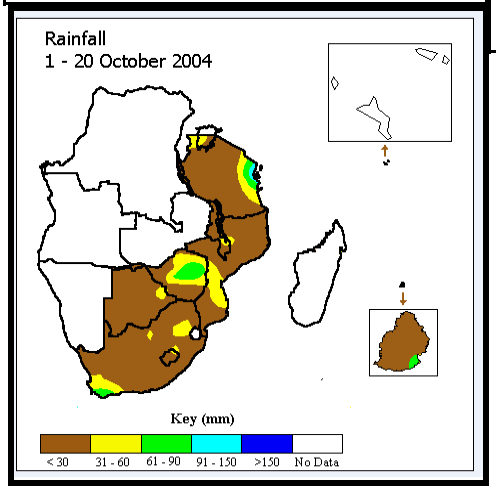

Fig. 1:Actual rainfall for 1-20 October 2004

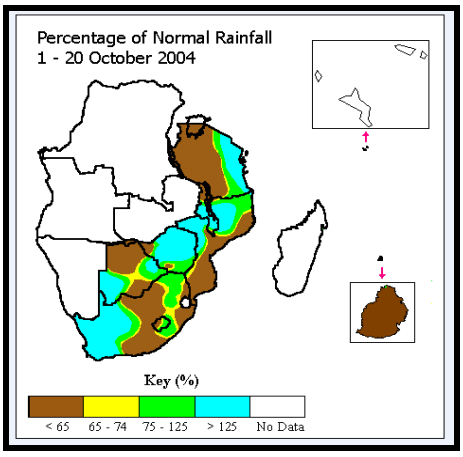

Fig. 2: Percentage of normal rainfall for 1-20 October 2004

EL-NIÑO UPDATE - WEAK WARM EPISODE EVOLVES

According to IRI, recent dynamical and statistical model forecasts indicate the development of weak warm episode in the next several months (Fig. 3). Thus the southern Africa rainfall season will develop during a period of this weak event. However, the impacts of the event are sometimes modulated by the conditions of the ocean basins adjoining SADC.

SST anomalies (departures from average) over the eastern Tropical Pacific are barely above 0°C during first three weeks of October 2004 (Fig. 4).

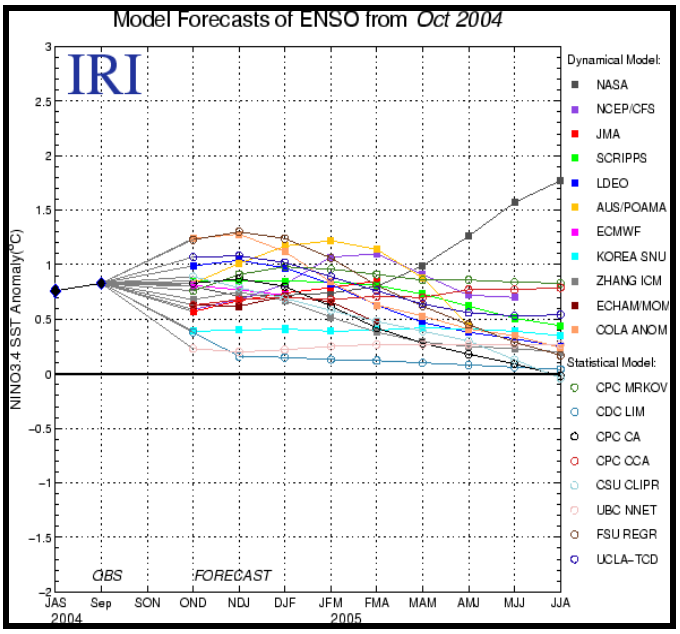

Fig.3: Model forecast for El-Niño event

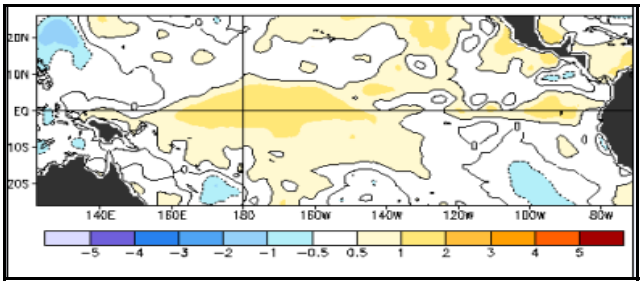

Fig 4, Mean SST anomalies over Pacific Basin 1 to 21 Oct 2004

All models projections are for a continuation of weak warm conditions in Nino regions,

Time series of SST anomalies over the eastern and central equatorial Pacific Ocean (Nino 3.4) shows a trend of slightly being positive since 2002, Fig. 5. By contrast a typical full-fledged El Nino would appear as in the schematic depicted in Fig 6.

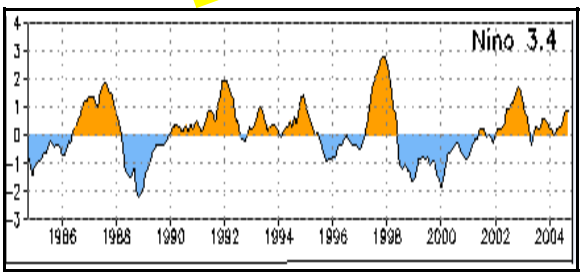

FIG 5, SST anomalies from 1986 to 2004

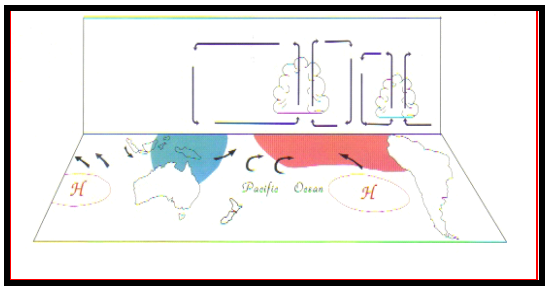

Fig. 6: Typical SST anomalies during an El-Niño event

The Southern Oscillation Index (SOI) has maintained negative values since March 2002 (Fig. 7). There have also been predominantly westerly low-level winds (positive 850 hPa zonal wind departures) in the equatorial eastern Pacific from April 2004.

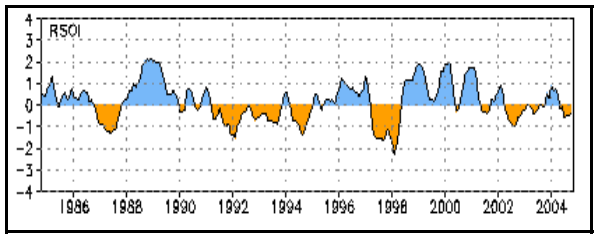

Fig 7. SO Index from 1986 to 2004….

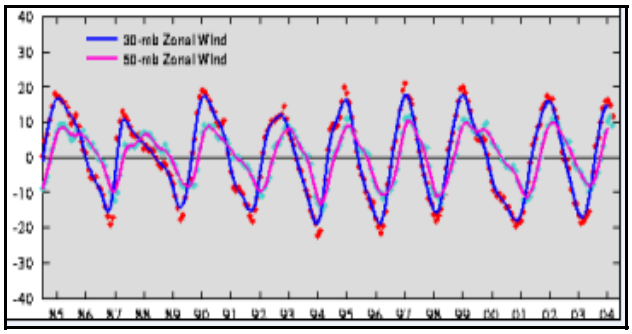

Fig 8.QBO patterns from 1985 to 2004

The westerly phase of the Quasi-Biennial Oscillation (QBO) has began to level out in September, 2004, Fig. 8. It should start to gradually swing into the easterly phase. In times past, some of the stronger El-Niño have coincided with the easterly phase.

SADC DMC in conjunction with other partners will continue to closely monitor the status of evolution of El-Niño. And relevant information and updates will be issued from time to time.

30—YEAR MEAN RAINFALL (1961—1990) FOR NOVEMBER—JANUARY

The mean total rainfall map shows maxima of above 500 mm over much of Malawi, Zambia, Angola, southern half of DRC , central and northern Mozambique as well as Mauritius and Seychelles. The remainder of the region receives rainfall less than 400 mm gradually decreasing southwestwards up to southwest South Africa and Namibia where the mean rainfall is below 100 mm (Fig. 9).

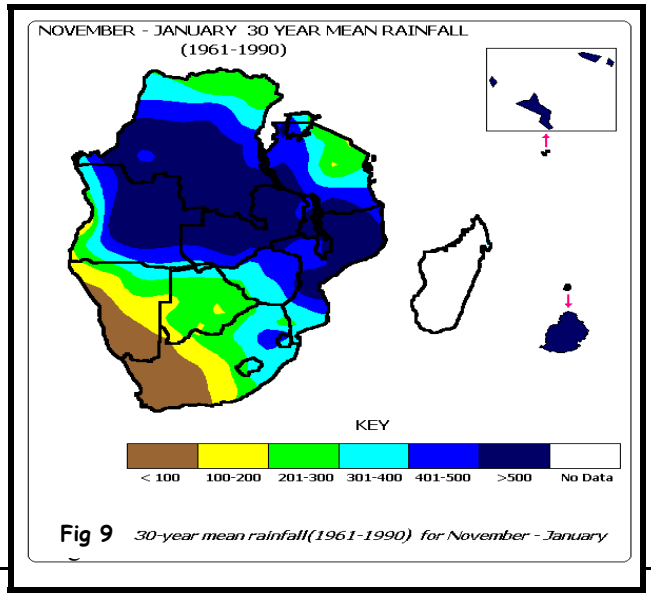

Fig 9 *30-year mean rainfall(1961-1990) for November - January*

RAINFALL FORECAST (NOVEMBER 2004 -JANUARY 2005)

FORECAST DETAILS

Zone I: (Angola, DRC, Namibia, Zambia, Tanzania, Malawi, northern half of Zimbabwe, northern half of Mozambique, bulk of Botswana and western South Africa)

High likelihood of Normal to Above-normal rainfall

Zone II: (Eastern flank of Botswana, southern Zimbabwe, southern Mozambique, most of South Africa, Swaziland and Lesotho)

High likelihood of Below-normal to Normal rainfall

Zone III: (Mauritius)

High likelihood of normal to above normal rainfall

Map caption

The number for each zone indicate the probabilities of rainfall in each of the three categories: Above normal, Normal and Below normal (Fig. 10). The top number indicates the probability of rainfall occurring in the Above-normal category, the middle number for Normal and the bottom number for the Below-normal. For example, in the case of Zone I there is a 35% probability for rainfall occurring in the Above-normal category; a 40% probability for rainfall in the Normal category; and 25% probability for rainfall

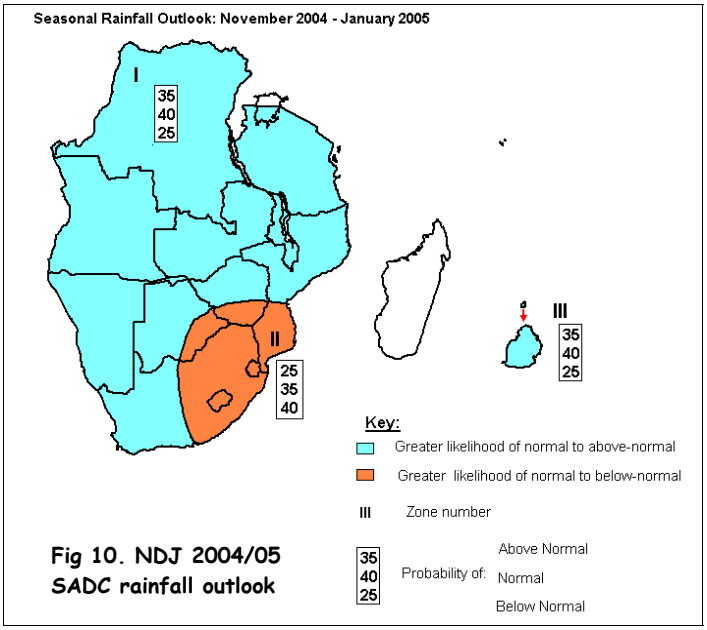

Fig 10. NDJ 2004/05 SADC rainfall outlook

for a Below-normal category. It is emphasized that boundaries between zones should be considered as transition zones.

- **This update is relevant only for three monthly time scales and relatively large areas. Local to month to month variations may occur.**
- **The users are strongly advised to contact their NMHSs for interpretation of this Outlook, finer details, updates and additional guidance.**

Acknowledgements:

- SADC NMHSs,
- Global climate monitoring and prediction centres
- WMO